

ORIGINAL CONTRACT  
RETURN TO FINANCE DEPT.

CITY OF CINCINNATI  
Professional Agreement

Mill Creek WWTP Odor Control Dispersion Model

Project No. 10240695

Contract No. 65x 12250

THIS AGREEMENT is made and entered into on the Effective Date (as defined on the signature page hereof) by and between the City of Cincinnati through its Department of Sewers (the "City") as the sole management agency for the operation and maintenance of the sewer system on behalf of the Metropolitan Sewer District of Greater Cincinnati, Hamilton County, Ohio, hereinafter "MSDGC" and **Brown and Caldwell**, a California Corporation, hereinafter "Consultant."

WITNESSETH:

WHEREAS, the City has determined to undertake activities needed to plan, develop and implement an Odor Dispersion Model for the Mill Creek WWTP Odor Control Dispersion Project, hereinafter "Project", and does not have a sufficient staff of permanent employees to do so; and,

WHEREAS, the Consultant is a skilled, competent, and experienced professional firm having the necessary personnel, equipment, and other resources to perform the required services; and,

WHEREAS, the Consultant has been selected in accordance with applicable portions of state laws and MSDGC policies to provide these services,

NOW THEREFORE, for and in consideration of the promises, covenants and agreements herein contained, the parties mutually agree as follows:

ARTICLE 1 - THE AGREEMENT

- 1.1 The Agreement includes written contract terms of 43 Articles ("First Part of the Agreement"), EXHIBIT A [Scope of Work, including deliverables (the "Work")], EXHIBIT B (Project Budget), EXHIBIT C (List of Consultant's Key Personnel, Consultant's Rate Schedule and Sub-consultants), and EXHIBIT D (Schedule of Services and Deliverables).

- 1.2 Where the terms and provisions of this First Part of the Agreement vary from the terms and provisions of the other documents included in the Agreement, the terms and provisions of this First Part of the Agreement shall prevail over the other documents included in the Agreement and, in like manner, EXHIBIT A shall prevail over EXHIBIT B.

## ARTICLE 2 - SCOPE OF WORK

The Consultant shall, in accordance with current professional standards and in a satisfactory and proper manner as reasonably determined by the City Manager of the City of Cincinnati acting through the staff of MSDGC, perform the Work.

## ARTICLE 3 - CONTRACT TERM

- 3.1 This Agreement is effective upon execution by the City (the "Effective Date") and terminates on September 30, 2017 (the "Termination Date"). This Agreement may be extended by the City for good cause shown for additional time upon execution of a duly-executed written amendment to this Agreement by the City and the Consultant.
- 3.2 Consultant will be authorized to begin the Work described herein by written Notice-to-Proceed from the City Manager or his/her designee. All of the assignments of the Consultant shall be completed in accordance with the schedule included in this Agreement. All of the Work will be completed prior to the termination date of this Agreement or the termination date of any extension of this Agreement as provided in Article 3.1 (for the purposes of the Agreement "Termination Date" shall mean either the date set forth in the Article 3.1 or in the case of an extension, the extended termination date). Requests to modify the Work are to be in writing and directed to the MSDGC Project Manager (as hereinafter defined), with a copy by the Consultant's Project Manager to the MSDGC Document Control section (as hereinafter defined).
- 3.3 Consultant agrees that time is of the essence in the performance of the Consultant's obligations under this Agreement. The Consultant agrees that no other work in its office will be permitted to interfere with work required under this Agreement in order to achieve timely performance, and that the required level of resources will be provided to meet the schedules set forth herein.
- 3.4 The Consultant shall employ at all times professional and support personnel with requisite expertise and in adequate numbers for the complete and timely performance of the Consultant's obligations hereunder. The City recognizes that the Consultant's performance must be governed by sound professional practices.
- 3.5 All Work will be completed prior to the Termination Date. If Consultant fails, through its own fault, to complete the performance required in this Agreement within the time set forth, as duly adjusted, then the City shall be entitled to the recovery of direct damages resulting from such failure. The City shall also be entitled to reasonable attorney fees and any costs incurred by the City in pursuing the recovery of damages

resulting from Consultant's failure to complete performance of its services within the time set forth in this Agreement.

#### ARTICLE 4 - CONSULTANT'S GENERAL RESPONSIBILITIES

- 4.1 For all Work on the Project, the Consultant will be responsible for: alternatives analysis; providing special and optional services as requested; and providing the project management services and quality control necessary to accomplish these services in a well-coordinated, efficient and effective manner as is consistent with the generally accepted standard of professional skill and care.
- 4.2 The Consultant shall cooperate fully with the City, and all other contractors employed for the Project, to effect proper coordination and progress to complete the Project on schedule and the Work in proper sequence.
- 4.3 Consultant shall be solely responsible for coordination of all of the Work. Consultant shall cooperate fully with all subcontractors, testing agencies and all others whose services, materials or equipment are required for the completion of the Project by the Termination Date.

#### ARTICLE 5 - CONTRACT AMOUNT

The City will pay the Consultant up to a maximum amount of Two Hundred Forty-Six Thousand, One Hundred Thirty-One dollars (**\$246,131**) ("Contract Amount") in accordance with this Agreement, including the terms of this First Part of the Agreement and EXHIBIT B, for the Consultant's successful completion of the Work. The Consultant agrees that it shall complete the Work for the total Contract Amount specified in this Article unless such amount is modified as provided in this Agreement. The Contract Amount includes all of Consultant's costs and fees, including profit.

#### ARTICLE 6 - CONSIDERATION AND PAYMENT

- 6.1 Payment to the Consultant for the Work will be made in accordance with the project budget set forth in EXHIBIT B.

Payment for Consultant's services shall be based upon a time and materials payment. Payment shall be based on actual salaries paid (direct rate) with agreed upon maximum rates, attached as Exhibit C, multiplied by 2.97. Payment is tied to the acceptable completion and acceptance by the City of a deliverable (or deliverables) as identified in a schedule of deliverables within EXHIBITS A and D.

Payment will be in accordance with the agreed-upon Consultant's employees performing the services and not exceeding the approved budget as shown in EXHIBIT B.

- 6.2 The City shall make payment not more frequently than monthly and upon submission of an approved requisition for payment (the "Invoice"). Invoices shall include a breakdown by Task listed in EXHIBIT B and include: i) a specification that the required

services for the deliverables have been performed; ii) current completion date for the Work invoiced iii) amount of SBE participation; iv) identification of the Project with the applicable identifiers such as title, contract number, certification number, CIP number, and sewer number; and project number; v) amount due and amount previously invoiced; vi) total amount previously authorized; and vii) attachments presenting data such as time sheets satisfactory to the City to document entitlement to payment. The Consultant shall promptly submit satisfactory Invoices as determined by the City. Properly submitted and approved Invoices shall be paid within thirty (30) days after receipt of the Invoices by the City. Inadequate Invoices will delay payment proportional to the additional review time required; however, undisputed invoice portions shall be processed for payment.

- 6.2.1 Any provision hereof to the contrary notwithstanding, the City shall not be obligated to make payment to the Consultant with respect to one or more of the following conditions for which the Consultant has been given at least fifteen (15) days written notice of the condition and failed to cure the condition:
  - 6.2.1.1 The Consultant is in default of any of its obligations under the Agreement; provided, however, that the City may retain only such amount as is reasonably necessary to cure the default.
  - 6.2.1.2 Part of the payment requested is attributable to services that were not performed in accordance with this Agreement; provided, however, that such payment shall be made as to the part thereof attributable to services that were performed in accordance with this Agreement.
  - 6.2.1.3 The Consultant has failed to make payments promptly to sub-consultants or other third parties used in connection with the services for which the City has made payments to the Consultant, unless the payment is being withheld by the Consultant as the result of a bona fide dispute.
- 6.2.2 The City shall have the right to request certified payrolls for either or both the Consultant's employees and the Consultant's sub-consultant's employees.
- 6.2.3 The Consultant acknowledges the importance of submitting complete requisitions for payment for all Work performed during the billing period for which it is requesting payment and will require its sub-consultants to do likewise. The City shall have no obligation to make payment for any of the Work performed on a time and materials basis by a sub-consultant that was performed more than sixty (60) days prior to the earliest date of Work performed by the Consultant for which the Consultant is requesting payment. (For example, if the Consultant submits a request for payment on June 1, 2014 that covers all of the Work performed by the Consultant between May 1 and May 31, 2014, the City is not obligated to pay Consultant for Work performed by a sub-consultant before March 1, 2014.)

- 6.3 The Consultant shall also be reimbursed without markup for other approved direct costs involved in performing the Work. The City shall not pay routine costs of doing business such as preparation of invoices, proposals, telephone charges, tools of the trade, home office administrative charges not directly related to the project, home office personnel, and charges for the mailing and reproduction of incidentals.
- 6.4 Expenses for travel expenses for lodging, meals, mileage, and incidental expenses shall be included in EXHIBIT B.
- 6.5 The City may pay for special education training for Consultant staff support that is requested by and approved in advance by the MSDGC Project Manager and that the MSDGC Project Manager has determined provides the Consultant staff support with essential information necessary to the delivery of the Consultant's professional services to the City.
- 6.6 Additional costs for which the City shall not reimburse the Consultant:
- 6.6.1 Costs associated with the preparation of amendments to this Agreement or the preparation or filing of claims;
- 6.6.2 Expenses of the Consultant associated with anticipated lost profits, lost revenue, lost income, or lost interest on earnings;
- 6.6.3 Costs of special consultants or attorneys, whether or not in the direct employ of the Consultant, employed for services specifically related to the resolution of a claim, dispute, or other matter relating to the acceptability of the Work.
- 6.6.4 Continuing education training expenses for individual consultants working on MSDGC projects.
- 6.7 The Consultant shall submit its invoices to MSD Accounts Payable, 1600 Gest Street, Cincinnati, Ohio 45204, or, to [MSDAccountspayable@cincinnati-oh.gov](mailto:MSDAccountspayable@cincinnati-oh.gov).

#### ARTICLE 7 - STANDARD OF CARE

- 7.1 In providing services under this Agreement, the Consultant will perform in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently performing similar services and practicing under similar circumstances. The Consultant makes no other representations or warranties, whether expressed or implied, with respect to the services rendered hereunder. Upon notice to the Consultant, and by mutual agreement between the parties, the Consultant will without additional compensation, correct those services not meeting such a standard.
- 7.2 The Scope of Work includes the development of Project-specific objectives and criteria. Consistent with the applicable standard of care, the Consultant's deliverables for the Project shall be consistent with agreed-upon Project-specific objectives and criteria. If the Consultant's deliverables are not consistent with Project-specific objectives and

criteria, the Consultant shall notify the City in writing of the differences between the deliverables and Project-specific objectives and criteria in sufficient time and with sufficient detail for the City to respond to the Consultant so that the differences can be resolved to the City's satisfaction.

- 7.3 Consultant and the City shall comply with applicable Laws and Regulations that the City has provided to Consultant in writing. This Agreement is based on these requirements that are in effect as of the date the parties entered into this Agreement. Changes to these requirements after the date the parties entered into this Agreement may be the basis for modifications to Consultant's scope of services, times of performance, and compensation.
- 7.4 The deliverables for the Project as developed through the Scope of Work described in EXHIBIT A shall be subject to the approval of the City. Payments to the Consultant for Work performed do not constitute such approval by the City.

#### ARTICLE 8 - CONSULTANT'S REPRESENTATIVE AND KEY PERSONNEL

- 8.1 Consultant shall designate and authorize Timothy Koch, who is an employee of Consultant, to act as its agent for all purposes under this Agreement, who shall be available at all times to the City for the purpose of notification and consultation, and who shall be designated as the "Consultant's Project Manager" having overall responsibility for all phases of Consultant's participation in the Project.
- 8.2 The parties acknowledge the importance of the City's confidence in the personal services of key members of the Consultant's team and the continuity of key members' participation in the services to be provided under this Agreement. This Agreement has been entered into on the representation that the individuals, firm affiliations, assignments, responsibilities, and office locations as listed in EXHIBIT C will be maintained for this Project.
- 8.3 No substitution or replacement of individuals or change in status (e.g., firm affiliation, assignment, responsibilities or office location) of the key personnel listed in EXHIBIT C shall be made by the Consultant without the prior approval of the MSDGC Project Manager, except when necessitated by causes beyond the Consultant's reasonable control. The City shall have the right in any event to approve any substitution or replacement or change in status for Consultant's personnel assigned to this Project. At the request of the City, the Consultant shall consult with it to resolve any situation in which a member of the Consultant's team (including, without limitation, any sub-consultant or any principal or employee thereof) is failing to perform to an adequate professional and technical standard. No act or omission of the City made or permitted under this Section shall relieve the Consultant of its sole responsibility for the Work.

#### ARTICLE 9 - ADDITIONAL WORK

- 9.1 The Consultant shall not be compensated for any work, except that which is specifically included in EXHIBIT A. Any work in addition to that included in EXHIBIT A shall be



requested in writing, authorized by the City, and included in an amendment to this Agreement. Any additional work first requested in writing, and then approved by the City, will be paid at the then-current rates set forth in EXHIBIT C.

- 9.2 The City may request changes in the Work within the general scope of the Work consisting of additions, deletions, or other revisions. If a change causes a change in the scope of work the parties shall agree upon adjustments to the Contract Amount, the Schedule, or Contract Term, if any, and such adjustments shall be made a written amendment to the Agreement signed by the parties prior to the performance of such change in the Work.
- 9.3 If the Consultant requests a change in the Work, Consultant shall provide to the City within fourteen (14) days of the event giving rise to the request a written proposal stating: (1) the reasons for the proposed change; (2) the impact of the proposed changes on compensation and schedule, and (3) the detailed nature of any costs to be incurred, including reasonable adjustment to other applicable provisions in this Agreement. If the City accepts any such requested Consultant change, an amendment to the Agreement shall be properly executed by the parties.
- 9.4 If the Consultant wishes to make a claim for an increase in any sums due the Consultant, it shall give the City written notice within fourteen (14) days of the event giving rise to the claim. The notice shall be given by Consultant before proceeding to execute any additional services relating to the Work which is the basis for such claim and include: (1) the amount of additional compensation claimed; (2) the justification for the belief that it is outside of, or a material change to the Agreement; and, (3) all supportive documentation.
- 9.5 The Consultant will not be compensated for performing any Work unless the written notice complying with the above Article 9 has been submitted in the time specified and a written amendment has been properly executed by the parties.

#### ARTICLE 10 - PERFORMANCE EVALUATION RATING

A performance rating has been established for this project. The Consultant acknowledges receipt of performance guidelines and criterion for rating. The periods for the rating will be in writing and mutually agreed upon by parties after execution of this Agreement.

#### ARTICLE 11 - SCHEDULE MANAGEMENT

- 11.1 Without limiting the Consultant's general obligations under this Agreement, the Consultant shall adhere to the time schedule set forth in EXHIBIT D.
- 11.2 Project Schedule - The Consultant shall be required to prepare a Project Cost-loaded Critical Path Method ("CPM") Schedule for completing all Work including submittal of deliverables by the Termination Date. The schedule format will be reviewed and approved by the City. The Consultant shall include milestone dates, as identified by the City, in the Schedule.

- 11.2.1 Schedule Recovery- In the event that an updated Schedule indicates that a milestone requirement falls twenty (20) or more work days behind schedule and there is no force majeure excusable delay or change to support a time extension, Consultant shall prepare and submit a recovery schedule ("Recovery Schedule") for acceptance by the City five (5) calendar days after the updated Schedule is submitted. The Recovery Schedule shall consist of proposed revisions to the Consultant's Schedule demonstrating how the Consultant intends to achieve all milestones set forth in this Agreement, including completion dates for Work allotted under the terms of this Agreement. An accompanying narrative shall describe the cause of the problems and the actions planned by the Consultant to recover lost time.
- 11.2.2 The Consultant shall promptly undertake appropriate action at no additional cost to the City to affect the Recovery Schedule. Appropriate recovery actions may include, but not be limited to, assignment of additional labor, and/ or overtime work, overlapping of activities or sequencing changes to increase activity concurrence.
- 11.3 The Consultant is responsible for coordinating its own schedules, including those of its sub-consultants, as well as activities of others directed by the Consultant.
- 11.4 The Consultant shall use CPM scheduling software to produce schedules and reports as specified by the City. The schedule files shall run on IBM PC compatible equipment and be in Primavera 6.0, latest version, or as designated by the City and be electronically editable.
- 11.5 The Consultant shall provide copies of all schedules both in hard copy and electronically, for review by the City. The electronic schedule provided to MSDGC shall be in the format designated by the City.

## ARTICLE 12 - MSDGC PROJECT MANAGER

- 12.1 The City will designate a party to act as its Project Manager on its behalf with respect to this Agreement (the "MSDGC Project Manager"). The MSDGC Project Manager may or may not be an employee of the City, in its sole discretion. The MSDGC Project Manager will examine the Consultant's submissions for quality and completeness and will render decisions pertaining thereto promptly, to avoid unreasonable delay in the progress of the Work to be performed by the Consultant.
- 12.2 In the course of the Agreement, upon reasonable notice to the Consultant, the City may make such other or additional arrangements for the delegation of its rights and responsibilities under this Agreement as it deems to be in its best interests.

## ARTICLE 13 - APPROVALS

The City will not unreasonably withhold any approval to be given by it with respect to submissions required to be made by the Consultant in the performance of this Agreement.



#### ARTICLE 14 -PROJECT BUDGET

- 14.1 The Consultant acknowledges the importance of completion of the Work in accordance with the Project Budget. The Consultant shall monitor the Work on a monthly basis, and report on its progress to guard against increases in costs which may be mitigated by the early attention of the parties with responsibility in the matter. Reports shall be made monthly.
- 14.2 The format of the budget report for the Work (the "Work Budget Report") shall be approved prior to submittal of the first report. Consultant shall submit the proposed format of the Work Budget Report for approval within two weeks of execution of this Agreement.

#### ARTICLE 15 - DOCUMENT CONTROL

- 15.1 It is the intent of the City to use a document control system for facilitating official project communication documentation between the Consultant and it. The Consultant shall coordinate with the MSDGC Project Manager to ensure that delivery of all communications, deliverables, reports, certificates of insurance, and other items as may be requested by the City, are submitted through its Document Control section.
- 15.2 All deliverables described in EXHIBIT A shall be provided to the City both electronically in an editable format and in hardcopy.

#### ARTICLE 16 - PROJECT CLOSEOUT

- 16.1 Prior to payment of the final invoice, Consultant agrees that it shall deliver to the City the following:
- 16.1.1 All electronic data files, plans, sketches, drawings, conversation reports, photographs, pamphlets, posters, documents, reports, memoranda, and reproducibles related to the Project and other information related to the Project as required by the City. Consultant may retain copies of any or all of the aforementioned materials for its files.
- 16.1.2 All non-expendable personal property purchased and approved by the City as Other Direct Costs as defined in EXHIBIT B.
- 16.1.3 A formal written release of all claims seeking further payment and financial requirements arising by virtue of this Agreement, other than such claims, if any, as may be specifically exempted by Consultant from the operation of the release in stated amount to be set forth therein.

#### ARTICLE 17 - SUB-CONSULTANTS

- 17.1 The Consultant shall advise the City on a periodic basis of the identities of key personnel engaged by its sub-consultant for this Agreement, of their availability to perform the

work for which they are responsible to the Consultant, and of the sufficiency of their staffing for the Project.

- 17.2 None of the Work shall be subcontracted to a sub-consultant without the prior written approval of the City, which shall not be unreasonably withheld. Identification of specific sub-consultant in EXHIBIT C shall constitute the required prior written approval of the City. Any services subcontracted shall be by written contract available to the City and such contract shall explicitly state that it is subject to each provision of this Agreement. The Consultant shall provide the same level of documentation for subcontract billing as is required for the Consultant's own workforce. The Consultant may not mark-up work performed by a sub-consultant unless such mark-up is specifically identified in this Agreement.
- 17.3 The City maintains a list of Vendors Debarred from Contracting or Subcontracting with the City, which may be accessed at: <http://www.cincinnati-oh.gov/purchasing> or may be furnished in other form upon request. The City will not contract with any firm or person on the list. It is the Contractor's (Consultant's) responsibility to verify that each subcontractor (sub-consultant) it proposes to use is an eligible firm or person. The City will not approve a subcontractor whose name appears on the list. The City shall neither accept nor be liable for any increase in costs, or other expenses, delay, loss, or subsequent ineligibility to contract with the City, incurred by a contractor as a result of the City rejecting any proposed person, firm, partner, principal, affiliate, subcontractor or supplier that is debarred or suspended after the submission of a bid, proposal, or other communication leading to a contract, but before the approval or award of the contract.
- 17.4 Nothing in this Article shall relieve the Consultant of its sole and prime responsibility for the performance of this Agreement, including all performance by sub-consultants.

#### ARTICLE 18 - ASSIGNMENT

The Consultant shall not assign, transfer, convey, sublet or otherwise dispose of any interest, rights, or obligations under this Agreement, without the prior written consent of the City.

#### ARTICLE 19 - EQUAL EMPLOYMENT OPPORTUNITY AND SMALL BUSINESS ENTERPRISE

- 19.1 The Consultant's employment and contracting practices related to this Agreement shall conform to the MSDGC Small Business Enterprise Program.
- 19.2 The Consultant agrees that by the 15th of each month it shall submit information on subconsultant utilization and monthly subconsultant payments into the City's online reporting site, the "Vendor Compliance & Certification System" (VCCS), or any successor site or system the City uses for this purpose, for this Project. Upon execution of this Agreement, the Consultant shall contact the Office of Workforce & Business Development to obtain instructions, the proper internet link, login information, and password to access the site and set up the necessary reports.

- 19.3 In connection with the performance of services under this Agreement, the Consultant hereby agrees not to discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin. The aforesaid provisions shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship. The Consultant agrees to post hereafter in conspicuous places, available for employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause. To the extent applicable, the Consultant shall comply with Title VI and VII of the Civil Rights Act of 1964, as amended; Title 49, Code of Federal Regulations; Part 21 through Appendix H and Title 23, CFR 710.405(b). To the extent applicable, the Consultant is required to comply with the provisions of Executive Order 11246, entitled "Equal Employment Opportunity", as amended by Executive Order 11375, and as supplemented in Department of Labor Regulations (41 CFR Part 60). To the extent applicable, the Consultant shall comply with the Immigration Reform and Control Act (IRCA) of 1986 and agrees to permit the MSDGC and its agents access to the Consultant's personnel records to verify its compliance with IRCA requirements.
- 19.4 Details concerning these programs may be obtained from Department of Sewers Procurement, 805 Central Avenue, Suite 234, Cincinnati, Ohio 45202; (513) 352-3278 and the MSDGC Office of Workforce and Business Development - Small Business Enterprise Program, 1600 Gest Street, Cincinnati, Ohio 45204; (513) 557-5967.

#### ARTICLE 20 - TERMINATION OF THE AGREEMENT, EVENTS OF DEFAULT, AND THE CITY'S RIGHT TO PERFORM CONSULTANT'S OBLIGATIONS

- 20.1 **TERMINATION BY CONSULTANT.** If the Consultant, in whole or substantial part, is stopped during the performance of the Work for a period of one hundred twenty (120) days under an order of any court or other public authority having jurisdiction, or as a result of an act of government, such as a declaration of a national emergency making materials unavailable, through no negligent act, negligent omission, intentional misconduct or other fault of Consultant, or if the Consultant is not paid for a period of thirty (30) days due to the City's failure to make proper payment to the Consultant, the Consultant may, upon thirty (30) days' written notice to the City, terminate this Agreement and recover from the City payment through the month during which such termination takes place. Costs associated with the start-up and shut-down of the Work shall be at the Consultant's expense. Upon termination by Consultant, the Consultant shall provide all documents for the Project and other Project-related data theretofore prepared by the Consultant for the Project by whatever method the City deems expedient, and the City may use such documents and other Project-related data prepared by Consultant to complete the Project; provided, however, Consultant shall not be liable for the City's use of incomplete documents or the City's reuse of Project-related data for any purpose other than as intended for the project described in this Agreement.
- 20.2 **EVENTS OF DEFAULT.** Any of the following events shall constitute "Events of Default" by Consultant under this Agreement:

- 20.2.1 The City should at any time determine, in its reasonable judgment, and notify Consultant in writing that the City has determined that the performance of the Work is not proceeding in substantial compliance with the requirements of this Agreement and Consultant fails, within ten (10) days after the City notifies Consultant of the same, to furnish to the City evidence reasonably satisfactory to the City that either (i) the performance of the Work is or will be brought into substantial compliance with the requirements of this Agreement, or (ii) provides reasonable justification for the noncompliance with the requirements of this Agreement and satisfies the City that such noncompliance will not adversely affect any milestone dates for the Work.
- 20.2.2 Consultant materially defaults in the performance of any other obligations of Consultant under this Agreement and fails to commence to cure satisfactorily such default within seven (7) days after the City gives Consultant written notice of the default; provided, however, that the City shall not be required to give additional written notice of, and Consultant shall not be entitled to a cure period with respect to, persistent defaults in the performance of the obligations of Consultant under this Agreement.
- 20.2.3. Consultant, after receipt of notice of same, persistently disregards any federal, state or local statute or ordinance, rule, regulation, permit or order of any public authority having jurisdiction over the Work or the Project.
- 20.2.4. The entry of an order for relief pursuant to any Chapter of Title 11 of the U.S. Code, as the same may be amended from time to time, with Consultant as debtor, or the filing by or against Consultant of any other insolvency proceeding or any other proceeding for compromise, adjustment or other relief under the laws of the United States or of any state relating to the relief of debtors.
- 20.3 Upon the occurrence and during the continuance of an Event of Default, the City may, but shall not be obligated to, take such actions as the City deems reasonable in order to cure the act or omission of Consultant that is the basis for the Event of Default, without thereby waiving the Event of Default, and the Contract Amount shall be reduced by the cost to the City of taking any such actions and Consultant shall only be paid for services rendered prior to the termination.
- 20.4 Upon the occurrence and during the continuance of an Event of Default, the City may, without prejudice to or limitation upon any other right or remedy which might be available to it at law or in equity, terminate the services of Consultant and, the Consultant shall provide to the City all documents for the Project and other Project-related data prepared by the Consultant for the Project by whatever method the City deems expedient, and the City may use risk, such documents and other Project-related data prepared by Consultant to complete the Project. The City recognizes that Consultant's work product submitted in performance of this Agreement is intended only for the project described in this Agreement and the Consultant shall have no liability for the City's alteration of Consultant's work product or its use by the City for any other purpose. In such case, Consultant shall not be entitled to receive any further payment

with respect to the Consultant's compensation until the Work is finished, nor shall it be relieved from its obligations under this Agreement. If the Agreement is terminated by the City as provided herein, the Consultant will be paid for the satisfactory services authorized and performed to the termination date, in a timely manner, and in accordance with applicable payment schedules set forth herein.

- 20.5 Termination for Convenience - The City may terminate this Agreement at any time by giving at least fourteen (14) days' notice, in writing, from the City to the Consultant. If the Agreement is terminated by the City as provided herein, the Consultant will be paid for the satisfactory services authorized and performed to the termination date, in a timely manner, and in accordance with applicable payment schedules set forth herein. The City shall take into account identified tasks and hours spent in determining the value of compensated services.
- 20.6 The City reserves the right to reduce the services required herein of the Consultant and reduce any project budget in a manner which reflects such reduction, by giving notice of such, in writing, stating the date such reduction will become effective.
- 20.7 Prior to final payment Consultant shall meet the requirements listed in Article 16 - PROJECT CLOSEOUT.

#### ARTICLE 21 - DISPUTE RESOLUTION

- 21.1 The City and Consultant agree to negotiate all disputes between them in good faith for a period of thirty (30) days from the date of notice of a dispute by one of the parties, prior to invoking the procedures described in the following paragraphs.
- 21.2 If the parties fail to resolve a dispute through negotiation under Paragraph 21.1, then the dispute shall be subject to mediation, followed by litigation, as described in the following paragraphs.
- 21.3 Mediation. Any dispute or other matter in question arising out of or related to this Agreement shall be subject to mediation as a condition precedent to the institution of legal or equitable proceedings by either party, unless the parties mutually agree otherwise. Mediation shall be in accordance with the Construction Industry Mediation Rules of the American Arbitration Association currently in effect or rules of such other forum as the parties have agreed. Request for mediation shall be filed in writing with the other party to this Agreement and with the American Arbitration Association, if this is the forum selected by the parties. The request may be made concurrently with the filing of a legal action but, in such event, mediation shall proceed in advance of any legal or equitable proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order.
- 21.4. Litigation. Disputes arising under this Agreement and related to the Project that are not resolved successfully through informal discussions between the parties or through

mediation will be the subject of litigation in the Court of Common Pleas for Hamilton County, Ohio.

#### ARTICLE 22 - COMPLIANCE WITH LAWS AND POLICIES

- 22.1 In the performance of the Work, the Consultant shall, as is consistent with the generally accepted standards of professional skill and care, comply with applicable statutes, ordinances, regulations, and rules of the Federal Government, the State of Ohio, Hamilton County, and the City of Cincinnati. Whenever notices, approvals, authorizations, waivers, instructions, or determinations by the City are required under this Agreement, they shall be effective only when given either (i) in writing and signed by the City, or (ii) by regulations and policies issued from time to time by the City.
- 22.2 In particular, as is consistent with the generally accepted standards of professional skill and care, the Consultant agrees to comply with applicable regulations pertaining to approvals for federal and state grants, and with applicable environmental regulations, including timely applications for permits. If a change in regulations would substantially increase or decrease the scope of the Work, the Consultant shall consent to such modifications of this Agreement as may be required by the City and the parties shall agree upon any necessary equitable adjustments in compensation.
- 22.3 This Agreement is subject to and the Consultant shall comply with the provisions of Chapter 319 of the Cincinnati Municipal Code that provide for a Prompt Payment System.

#### ARTICLE 23 -HOLD HARMLESS

- 23.1 The Consultant shall indemnify, defend, save and hold the City of Cincinnati and the Board of County Commissioners of Hamilton County, Ohio and their officers, employees and agents free and harmless against any and all claims, demands, actions, judgments, losses, damages, settlements, costs, charges, professional fees, or other expenses or liabilities to the proportionate extent arising directly or indirectly out of or relating to any and all negligent acts, errors, or omissions by the Consultant (including its employees and agents employees, agents and sub-consultants) in performance of the Work or any ambiguities in the plans and specifications prepared by the Consultant, provided that such ambiguities are originated by or the responsibility of the Consultant and to the extent that such ambiguity is the result of a negligent act, error, or omission of the Consultant in the performance of this Agreement. The Consultant shall be given the opportunity to defend on behalf of the City of Cincinnati and Hamilton County, any action or claim brought against it which, if successfully prosecuted, would give rise to a claim hereunder against the Consultant.
- 23.2 This indemnification shall not result in the unjust enrichment of the City of Cincinnati or the Board of Commissioners of Hamilton County. In the case of any material ambiguities, the City shall afford the Consultant a reasonable opportunity to mitigate damage and clarify any such ambiguities within a reasonable time after discovery by or notice to the City. The City shall promptly notify the Consultant of any claim, demand,

action, cause of action or other liability for which it may seek indemnification from the Consultant.

- 23.3 Subsurface Investigations. In soils, foundation, groundwater, and other subsurface investigations, the actual characteristics may vary significantly between successive test points and sample intervals and at locations other than where observations, exploration, and investigations have been made. Because of the inherent uncertainties in subsurface evaluations, changed or unanticipated underground conditions may occur that could affect total cost and/or execution. These conditions and cost/execution effects are not the responsibility of Consultant.

#### ARTICLE 24 - FORCE MAJEURE

Neither party to the Agreement shall be deemed to be in default in the performance of its obligations hereunder if that party is prevented or delayed from performing by forces beyond its reasonable control including, without limitation, acts of God or of a public enemy; interference or delay by municipal, state, federal, or other governmental agency; any catastrophe resulting from flood, fire, extreme weather conditions, explosion, or other cause beyond the reasonable control of the non-performing party and labor disputes or other work stoppages.

#### ARTICLE 25 -REPORTS, INFORMATION AND AUDITS

- 25.1 The Consultant, at such time and in such form as the City may require, shall furnish the City such reports as may be requested pertaining to the Work, the costs and obligations incurred or to be incurred in connection therewith, and any other matters covered by this Agreement. The Consultant shall retain all financial and administrative records for a minimum of three years following completion of this Agreement, and shall permit the City or any of its representatives or auditors access to such records upon advance notice during normal business hours.
- 25.2 Whenever the Consultant has obtained the Cincinnati Area Geographical Information System (CAGIS) data at no cost for the purpose of performing the Work, the Consultant agrees not to use any such CAGIS data for non-MSDGC projects. Additionally the Consultant shall require its sub-consultants to agree not to use any such CAGIS data for any non-MSDGC project. If the Consultant has purchased CAGIS data for multi-client use, no portion of those costs will be reimbursed by the City.
- 25.3 Except as authorized by the City, the Consultant and other sub-consultants shall not provide MSDGC infrastructure records or information to persons outside of the Consultant's organization and sub-consultants except as may be required by subpoena or legal proceeding.

#### ARTICLE 26 - CONFLICT OF INTEREST

No officer, employee, or agent of the City who exercises any functions or responsibilities in connection with the planning and carrying out of the Work, nor any immediate family member,



close business associate, or organization which is about to employ any such person, shall knowingly have any personal financial interest, direct or indirect, in the Consultant or in this Agreement. The Consultant shall take appropriate steps to assure compliance. The Consultant agrees that it will not contract with any sub-consultant in whom the Consultant has any personal financial interest, direct or indirect. The Consultant further covenants that no person who has any financial or conflicting interest in the Work shall be knowingly employed. The Consultant has the responsibility to request disclosure of potential conflicts of interest. The Consultant must report potential conflict of interest to the City for direction and disposition.

#### ARTICLE 27 - CONSULTANT INSURANCE

- 27.1 It shall be the responsibility of the Consultant to protect all life and property, and to protect the City, the Consultant, and its employees and sub-consultants from liability claims that may result from performance of the Work.
- 27.2 The Consultant shall secure and maintain general liability insurance protecting Consultant against claims for bodily injury, death or property damage which may arise as a result of the Consultant's actions during the performance of the Work in an amount of at least One Million Dollars (\$1,000,000.00) per occurrence and Two Million Dollars (\$2,000,000.00) per project in the aggregate. The City of Cincinnati and the Board of Commissioners of Hamilton County, Ohio shall be named as additional insureds under this policy.
- 27.3 The Consultant shall secure and maintain professional liability insurance with a combined single limit of One Million Dollars (\$1,000,000.00) per claim with a maximum deductible not to exceed Twenty-Five Thousand Dollars (\$25,000.00). Such insurance shall extend to the Consultant and to its legal representatives in the event of death, dissolution or bankruptcy, and shall cover the negligent acts, errors and omissions of the Consultant, sub-consultants and employees. Such insurance shall extend to any negligent act, error or omission in the performance of the Work committed by the Consultant, its sub-consultants, or employees, or any other person or entity for whom the Consultant is legally liable. Such coverage shall be in effect from the date services are first provided under this Agreement and shall be maintained in force until the later of (i) the completion of the Work or (ii) official acceptance of the Project by the City; and, provided that such insurance is generally available, shall be maintained for an additional period of three (3) years after the later of (i) the completion of the Work or (ii) official acceptance of the Project by the City.
- 27.4 The Consultant shall secure and maintain Workers Compensation insurance as required by the laws of the State of Ohio.
- 27.5 The Consultant shall also carry insurance coverage for valuable papers for the restoration of plans, field notes, drawings, computations, specifications or other documents in the event of loss or destruction of such materials in the custody of the Consultant, in an amount sufficient to cover the cost of restoration.
- 27.6 The Consultant shall secure and maintain automobile liability insurance with a limit of One Million Dollars (\$1,000,000.00) per occurrence. The City of Cincinnati and the Board

of Commissioners of Hamilton County, Ohio shall be named as additional insureds under this policy.

27.7 Prior to executing this Agreement the Consultant shall provide the City with proof of all the insurances required herein. The Consultant shall provide the City thirty days written notice prior to any cancellation (except for non-payment) or non-renewal of any insurance required herein. Consultant shall deliver one copy each of the certificates of insurance and endorsements (and other evidence of insurance requested by the City or any other additional insured) which Consultant and all sub-consultants are required to purchase and maintain.

27.8 All insurance must be provided through companies authorized to do business in the State of Ohio and rated at least A: VII by the A. M. Best Company.

#### ARTICLE 28 - INDEPENDENT CONTRACTOR

The Consultant shall perform all of the Work as an independent contractor and not as an officer, agent, servant, or employee of the City. The Consultant shall have exclusive control of and the exclusive right to control the details of the Work and all persons performing the same and shall be solely responsible for the acts and omissions of its officers, agents, employees, contractors, and sub-consultants, if any. Nothing herein shall be construed as creating a partnership or joint venture between the City and the Consultant. No person performing any of the Work shall be considered an officer, agent, servant, or employee of the City, nor shall any such person be entitled to any benefits available or granted to employees of the City.

#### ARTICLE 29 - CONFIDENTIAL OPINIONS OF PROBABLE COST

Notwithstanding publication or legislative proceedings, all opinions of probable cost prepared by the Consultant are to be considered confidential. It is agreed between the parties that the Consultant shall make reasonable attempts to control the confidentiality of any opinion of probable cost that the Consultant became privy to as a result of this Agreement. Any requests by others for opinions of probable cost shall be referred to the City. Consultant shall not be restricted from releasing information in response to a subpoena, court order, or other legal process but shall notify the City of the demand for information before responding to such demand.

#### ARTICLE 30 - SEVERABILITY

In the event that any provision of this Agreement is declared or determined to be unlawful, invalid, or unconstitutional, such declaration shall not affect, in any manner, the legality of the remaining provisions and each provision of the Agreement will be and is deemed to be separate and severable from every other provision.

#### ARTICLE 31 - DRUG-FREE WORKPLACE

The Consultant certifies and affirms that the Consultant will comply with all applicable state and federal laws regarding a drug-free workplace. The Consultant will make a good faith effort

to ensure that all employees performing duties or responsibilities under this Agreement while working on state, county, city or private property, will not purchase, transfer, use or possess illegal drugs or alcohol, or abuse prescription drugs in any way.

#### ARTICLE 32 - OWNERSHIP OF PROPERTY

- 32.1 The Consultant agrees that at the expiration or in the event of any termination of this Agreement that any memoranda, maps, drawings, working papers, reports, and other similar documents produced as a deliverable in the performance of the Work for the sole benefit of the City shall become the property of the City upon payment therefore, and the Consultant shall promptly deliver such items to the City without any additional compensation to the Consultant. The Consultant may retain copies for its record.
- 32.2 Unless specified otherwise, the City will rely upon the printed, plotted, electronic or hard copies of material prepared by the Consultant. Any discrepancy between the hard copy and the electronic version identified by the City and pointed out to the Consultant within reasonable time of delivery by the Consultant must be reconciled by diligent efforts of the Consultant at no additional cost to the City; provided, however, because data stored on electronic media can deteriorate undetected or be modified without Consultant's knowledge, the Consultant makes no warranty as to the compatibility of the data files beyond the specified release or version of the software, or with the City's hardware and / or software configurations unless specifically set forth in a Task Order, nor shall Consultant be responsible for maintaining copies of the submitted electronic files after acceptance by the City or be held liable for completeness or accuracy of the electronic data after the acceptance thereof.
- 32.3 Reports and other documents to be submitted to the City will conform to the instructions of the City with respect to the format, numbering, labeling and indexing of documents. Engineering drawings shall in every instance be stamped and signed by an Ohio licensed professional engineer.

#### ARTICLE 33 - INTELLECTUAL PROPERTY

Except as otherwise provided herein, all documents, drawings, electronic files, and specifications prepared by the Consultant as a deliverable of the Work shall become the property of the City; however, the Consultant may have the right to their use but not for resale. It is agreed that any original documents, drawings, electronic files, and specification designed for the City and any variations to any original documents and drawings designed for the City MSDGC are the property of the City. The Consultant shall retain its rights in its standard drawing details, designs, specifications, databases, computer software and other proprietary property. Any modification or use by the City of the Consultant's work product other than for which it was prepared shall be at the City's discretion and without expression of suitability or applicability by the Consultant with respect to the modification or other use at user's sole risk without liability or legal exposure to the Consultant. No use of MSDGC infrastructure information is permitted unless authorized by the City in writing.

#### ARTICLE 34 - RIGHT TO REVIEW

The City shall have the right at any time and at its sole discretion to submit for review any or all parts of the Work performed by the Consultant to consulting engineers or other specialists engaged by the City for that purpose. The Consultant shall cooperate fully in such review at the City's request.

#### ARTICLE 35 - RIGHTS AND REMEDIES

The City's review, approval, acceptance or payment for any part of the Work shall not operate as a waiver of any rights under this Agreement and the Consultant shall be and remain liable to the City for all damages incurred by the City as the result of the Consultant's failure to perform in conformance with the terms and conditions of this Agreement. The rights and remedies of the City provided for under this Agreement are in addition to any other rights or remedies provided by law. The City may assert a right to recover damages by any appropriate means, including but not limited to set-off, suit, withholding, recoupment, or counter-claim.

#### ARTICLE 36 - MODIFICATIONS

If the State of Ohio or its agencies require modifications or changes in this Agreement as a condition precedent to the granting of funds for any of the Work, the Consultant agrees to consent to such modifications or changes as may be reasonably required to obtain such funds. An equitable adjustment shall be made to the Consultant's compensation for any such modification or change.

#### ARTICLE 37 - THIRD PARTY RIGHTS

Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than the City and the Consultant.

#### ARTICLE 38 - LAW TO GOVERN

This Agreement is entered into in the State of Ohio. The City and the Consultant agree that the law of the State of Ohio shall govern the rights, obligations, duties, and liabilities of the parties to this Agreement and shall govern the interpretation of this Agreement.

#### ARTICLE 39 - FORUM SELECTION

The Consultant and its successors and assigns acknowledge and agree that all state courts of record sitting in Hamilton County, Ohio, shall be the exclusive forum for the filing, initiation and prosecution of any suit or proceeding arising from or out of, or relating to this Agreement, or any amendment or attachment thereto, including any duty owed by the Consultant to the City in connection therewith.

#### ARTICLE 40 - ENTIRETY

This Agreement (which includes the Exhibits attached hereto) contains the entire contract between the parties as to the matters contained herein. Any oral representation or modification concerning this Agreement shall be of no force and effect.

#### ARTICLE 41 - AUTHORIZATION OF SIGNATORY ON BEHALF OF CONSULTANT

The Consultant shall provide the City with adequate proof that the party signing this Agreement has the authority to bind the Consultant. For example, if the Consultant is a corporation, Consultant shall provide the City with a current resolution of its board of directors authorizing the signatory to sign on behalf of the Consultant, and shall include the signatory's title. If the Consultant is a limited liability company, Consultant shall provide the City with a copy of the operating agreement and, if appropriate, any assignments of authority permitted by the operating agreement.

#### ARTICLE 42 - NOTICES

This Agreement requires that all notices, including notices of changes to the authorized signatory, Consultant name, primary contact and other contact information provided below, shall be personally served or sent by U.S. mail, postage prepaid, addressed to the parties as follows:

i. To the City of Cincinnati:

Full Name: Patrick A. Duhaney  
Chief Procurement Officer/City Purchasing Agent  
City of Cincinnati

Mailing Address: 805 Central Avenue - Suite 234  
Cincinnati, Ohio 45202

ii. To the Consultant:

Full Legal Name of Consultant:	<u>Brown and Caldwell</u>			
Primary Contact Name:	<u>Timothy E. Koch, P.E., Vice President</u>			
Federal Tax I.D. No.:	<u>94-1446346</u>			
Telephone No.:	<u>513-719-6100</u>	Fax No.:	<u>513-719-6105</u>	
Mailing Address:	<u>25 Merchant Street, Suite 145</u>	<u>Cincinnati</u>	<u>OH</u>	<u>45246</u>
	Street Address	City	State	Zip
Remittance Address:	<u>P.O. Box 45208,</u>	<u>San Francisco</u>	<u>CA</u>	<u>94145-0208</u>
	Street Address	City	State	Zip
Primary Contact Email:	<u><a href="mailto:tkoch@brwnncald.com">tkoch@brwnncald.com</a></u>		Website:	<u><a href="http://www.brownandcaldwell.com">www.brownandcaldwell.com</a></u>

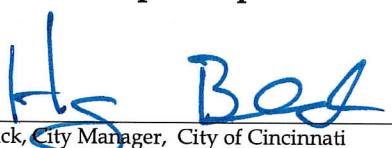
#### ARTICLE 43 - WAIVER

This Agreement shall be construed in a manner that a waiver of any breach of any provision of this Agreement shall not constitute or operate as a waiver of any other breach of such provision or of any other provisions, nor shall any failure to enforce any provision hereof operate as a waiver of such provision or of any other provision.

(signatures on following page – remainder of this page left intentionally blank)


This Agreement is executed by the parties on the dates indicated below, effective as of the later of such dates (the "Effective Date").

**City of Cincinnati  
an Ohio municipal corporation**

  
Harry Black, City Manager, City of Cincinnati  
as the sole management agency for the operation  
and maintenance of the sewer system on behalf of  
the Metropolitan Sewer District of Greater  
Cincinnati

9/2/16  
Date

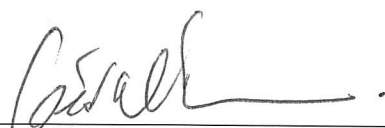
**Approved as to Form:**

  
Diana Christy, Assistant City Solicitor

**City Purchasing Approval:**

  
Patrick A. Duhaney, Chief Procurement Officer

**MSDGC Recommended:**

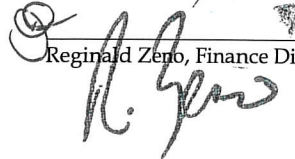
  
Gerald R. Checco, Director of Sewers

**Certification of Funds:**

Date: SEP 02 2016

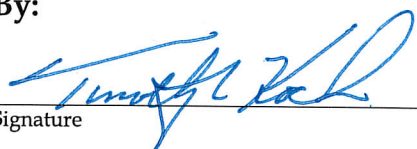
Coding: 704x 400x 0000x 7661x 10240695

Amount: \$ 246,131.00

  
Reginald Zeno, Finance Director

**Brown and Caldwell  
a California Corporation**

By:

  
Signature

Timothy E. Koch  
Printed / Typed Name

Vice President  
Printed / Typed Title

8/30/16  
Date

[As authorized by corporate resolution dated

Feb 5, 2016]

**MSDGC Accounting  
Approval:**

  
Steve Niemeyer, Senior Accountant



## **EXHIBIT A**

### **Odor Dispersion Model**

**Background:** In 2015, MSD identified improvements to enhance its Mill Creek WWTP Odor Control Program, selecting Hazen and Sawyer to work closely with operators and engineers (an Odor Control Team) to better characterize and implement short and long term needs. As part of the enhancement program, the Odor Control Team identified and implemented operational controls that resulted in optimization and reduction of odor emission - that effort continues to be successful as the culture around odor control operations and troubleshooting improves. Working with a community advisory panel, MSD developed a goal of 0% emissions off site and conducted a comprehensive odor evaluation - this effort has resulted in quantifying odor emission sources from the WWTP from many sampling events from August through November 2015. In addition to the optimizations, there are some immediate capital improvements needed prioritized and working towards design or construction approval using the 2015 evaluation - they are: headworks and ferrous feed, septage receiving and solids handling phase 1 - these are determined to be top priorities for implementing enhanced controls as soon as possible based on the limitations of the current controls and the outcomes of the 2015 comprehensive sampling and odor evaluation. As the 2015 evaluation is concluding, the second phase of the Odor Control Program will begin in parallel with development of an Odor Dispersion Model.

**Purpose:** As a parallel track to the efforts noted above, the Odor Dispersion Model shall be developed as a tool for MSD to evaluate and consider odor sources and control into the future. The Odor Dispersion Model shall be developed with the baseline data collected in 2015 and supplemented with additional data as necessary. The odor dispersion model will assist in the selection of future odor control mitigation strategies or capital improvements of the entire Mill Creek WWTP.

#### **Summary of Scope of Work**

##### **Work included in this task order includes the following:**

MSD anticipates using the Odor Dispersion Model to evaluate existing operations and future improvements. The model will be developed and run as part of future evaluations, including supporting future BCEs, to provide data that could be used to support or enhance a project to maximize the mitigation of odors, upon completion of the model and QA/QC. It is anticipated that MSD will rely on expert services to assist in running scenarios with the model. However, long term, it is anticipated that this expertise will be brought in house to help facilitate the long term enhancement and achievement of the goal of zero emissions offsite. Model files will be turned over to MSD at completion of the project with training, operation and maintenance tools.

- **Task 100 – Gather Model Input Data** - Model input data will be gathered including existing odor sources, plant layout, weather data, receptor locations, and odor control criteria. Data from

2015 sampling efforts will be used for the baseline odor modeling. A technical memorandum will be developed to summarize the model input data and odor control criteria.

- **Task 200 – Develop Baseline Odor Dispersion Model** – Dispersion model will be developed with initial sampling data and available data gathered during Task 100. Additional sampling needs will be identified from the baseline dispersion model development. A memorandum will be developed to summarize the baseline model setup and initial results from the model.
- **Task 300 – Odor Sampling** – Additional odor sampling will be performed to supplement data gathered during 2015 sampling effort.
- **Task 400 – Update Dispersion Model and Evaluate Additional Improvements** – Dispersion model will be updated with additional data and used to evaluate odor impacts of existing facilities/controls and proposed improvements at the Mill Creek WWTP. A technical memorandum will be prepared to summarize task activities / findings and future recommendations.

#### **Task 100 – Gather Model Input Data**

Model input data will be gathered including existing odor sources, plant layout, weather data, receptor locations, and odor control criteria.

#### **Subtask 110 – Data Review and Evaluation**

The following information will be collected to order to set up the baseline odor dispersion model:

- Electronic drawings of the facility, including location and heights of all onsite buildings and delineation of the plant fence line. It is assumed that MSDGC will provide CADD or other electronic formats of the existing plant facilities.
- Source parameters and odor emission rates (H<sub>2</sub>S and odor strength) from all onsite odor sources, including all emission parameters (location, dimensions, flow rates, operational data, etc.). The emission rate information will be obtained based on the recent odor sampling conducted under the odor program and other recent sampling data. Additional odor monitoring needs will be identified.
- Meteorological data – five years of representative hourly National Weather Service (NWS) data from the nearest airport. This data is generally provided by the state regulatory agency (OEPA). On-site weather station data will also be gathered and compiled. In the event that appropriate data is not available, the meteorological data will be purchased.

- Terrain and receptor input – Terrain data of the surrounding area provided by United States Geological Survey (USGS) will be obtained. The implications of the complex terrain in the Price Hill area will be considered. A Cartesian receptor will be established out to 2 to 3 kilometers from the fence line (extent to be determined upon review of the site data). Receptors spacing around the fence line will be at 50 meter spacing. Receptors spacing from the fence line to one kilometer will be at 100 meter spacing. A 250 meter receptor spacing will be used from one kilometer to the end of the receptor grid.

#### Subtask 120 – Odor Control Criteria Development

The H<sub>2</sub>S and odor strength criteria to be used to evaluate the offsite impacts from the baseline facility sources and the effectiveness of the proposed controls will be established with input from MSDGC and CAP. These criteria will be based on standards consistent with accepted practices in wastewater odor control.

#### Subtask 130 – Kickoff Meeting

The Consultant shall attend a kickoff meeting with MSDGC.

#### Subtask 140 – Technical Memorandum

A technical memorandum that summarizes the proposed model input data, modeling approach, and identifies any gaps in the required data will be provided.

#### Task 200 – Develop Baseline Odor Dispersion Model

The dispersion model will be developed with initial sampling data and available data gathered during Task 100.

#### Subtask 210 – Model Development

The “baseline” WWTP will be modeled using AERMOD with five years of representative meteorological data. The offsite impacts of individual sources at the facility and the overall facility impact offsite will be determined. The baseline odor results will be compared to the recent *OdoWatch* model results.

#### Subtask 220 – Technical Memorandum

A technical memorandum that provides the results of the baseline modeling in tabular and graphical formats (e.g., H<sub>2</sub>S and odor strength isopleths) in order to evaluate the extent of the offsite impacts from the existing plant operations will be provided to MSDGC.

#### Subtask 230 – Review Meeting

The Consultant shall present the baseline dispersion model in a review meeting with MSDGC.

#### Task 300 Perform Odor Sampling

Additional samples are anticipated to supplement the baseline sampling program, already performed.

#### Subtask 310 – Field Sampling Program

Consultant shall collect up to 30 additional samples. The samples will be analyzed per Subtask 320. Shrewsberry & Associates, LLC will assist with this task.

#### Subtask 320 – Laboratory Analysis

St. Croix Sensory, Inc. laboratory will be utilized for odor panel testing to determine the D/T (Dilution to Threshold) value of up to 15 samples.

Mayfly Odor Laboratory, or equal, will be utilized to analyze up to 15 Tedlar bag samples for volatile organic compounds (VOCs) and volatile sulfur compounds (VSCs). Mayfly will compare sample constituents to individual compounds listed in Mayfly's odor library of over 260 organoleptically active compounds or odor marker compounds. Additionally, Mayfly's analysis results will report concentrations in parts per billion for all VOCs and VSCs detected in the samples.

#### Subtask 330 – Continuous Compound Monitoring

This task shall be executed upon authorization of the MSDGC project manager.

Consultant will work with MSD and Consolidated Analytical Systems, or equal, to utilize multiple Gas Chromatographs for continuous monitoring for comparison to Mayfly Odor Laboratory Results. Shrewsbury & Associates, LLC will assist with this task.

#### Task 400 - Update Dispersion Model and Evaluate Additional Improvements

The consultant shall update the dispersion model based on available data and present the results and subsequent recommendations for future improvements.

#### Subtask 410 – Update Model

The AERMOD model of the plant will be revised to include proposed odor control upgrades and plant improvements. The offsite impacts of individual sources at the facility and the overall facility impact offsite under the proposed plant update will be determined. Any sources that result in offsite impacts above the odor criteria will be identified and evaluated for frequency, timing, etc.

Additional model runs, considering alternate control strategies will be performed. Up to 10 alternative model runs will be developed as part of this effort.

#### Subtask 420 – Final Report

The results of the baseline and proposed plant improvement modeling will be summarized in a report. The report will also include recommendations for future improvements to further control odors from the Mill Creek WWTP.

#### Subtask 430 – Review Meeting

The Consultant shall present the contents of the report and recommendations for future improvements to further control odors from the Mill Creek WWTP in a review meeting with MSDGC.

Upon project completion and acceptance by MSDGC, the Consultant will be responsible for providing all electronic files comprising the inputs and outputs of the MSDGC facility model, exclusive of files for which distribution is restricted by license agreements, to allow full beneficial internal use of the dispersion model. The electronic files will be capable of being updated by MSDGC, using the same or a compatible modeling software package, to be used for future planning and continued evaluation of odor control improvements at the facility. Files that have been modified are the full responsibility of MSDGC and such modifications will not impose liability on Brown and Caldwell.

**Exhibit B - Budget**

**MSDGC Mill Creek WWTP Odor Dispersion Model**

Task	Task Description	Project Manager	Project Assistant	Technical Director	Project Engineer	Dispersion Modeler	Field Investigator	Project Officer	Total Labor Hours	Total Labor Effort	Laboratory Analysis	Airfare	Lodging and Food	Other Travel	Subtotal	Cost	Shrewsbury & Associates, LLC	Consolidated Analytical Systems, Inc.	Total Sub Cost	Total Expense Cost	Total Expense Effort	Total Effort
100	Gather Model Input Data	16	8	28	38	8	58	14	170	28,272		1,200	400	180	1,780					1,780	1,780	30,052
110	Data Review and Evaluation		4	2	2	4	12	2	26	3,574				40	40					40	40	3,614
120	Odor Control Criteria Development	8		4	8			4	24	4,967												4,967
130	Kickoff Meeting	4		12	16		6	4	42	8,384		1,200	400	140	1,740					1,740	1,740	10,124
140	Technical Memorandum	4	4	10	12	4	40	4	78	11,347												11,347
200	Develop Baseline Model	28	10	36	52	56	70	12	264	43,973		600	200	80	880	2,000	2,000		2,000	2,880	3,080	47,053
210	Model Development	4		16	16	40	24		100	16,770												16,770
220	Technical Memorandum	20	10	20	24	16	40	8	138	22,451												22,451
230	Review Meeting	4			12		6	4	26	4,752		600	200	80	880	2,000	2,000		2,000	2,880	3,080	7,832
300	Odor Sampling	8		12	40		68		128	18,812	23,075		160	23,235	15,000	50,000	50,000	50,000	88,235	97,043	115,855	
310	Field Sampling Program	4		8	24		40		76	11,265			100	100	10,000	10,000			10,100	11,100	22,365	
320	Laboratory Analysis				4		4		8	1,201	23,075				23,075				23,075	25,383	26,584	
330	Continuous Compound Monitoring	4		4	12		24		44	6,346			60	60	5,000	50,000	50,000	50,000	55,060	60,560	66,906	
400	Update Model and Eval Improvements	28	10	48	68	64	70	12	300	51,432		1,200	400	140	1,740				1,740	1,740	1,740	53,172
410	Update Model	4		16	24	48	24		116	19,774												19,774
420	Final Report	20	10	20	32	16	40	8	146	24,096												24,096
430	Review Meeting	4		12	12		6	4	38	7,562		1,200	400	140	1,740				1,740	1,740	1,740	9,302
Total Hours		80	28	124	198	128	266	38	862													
Hourly Rate <sup>1</sup>		\$167.21	\$89.04	\$234.15	\$205.70	\$169.79	\$94.65	\$261.66														
GRAND TOTAL		13,377	2,493	29,035	40,729	21,734	25,178	9,943	142,489	23,075	3,000	1,000	560	28,135	17,000	50,000	67,000	95,135	103,643	246,131		
Hours and Dollars are rounded to nearest whole number. To display decimals, change the format of the cells.																						

Hours and Dollars are rounded to nearest whole number. To display decimals, change the format of the cells.

**Notes:**

- <sup>1</sup> Labor Rate includes 2.97 Multiplier
- Subcontractor and Direct Expenses include a 10% markup. Airfare, Lodging and Food, and Other Travel to be reimbursed at the federal rate with no markup.

**EXHIBIT C**  
**Brown and Caldwell Billing Rates - 2016**

Note: salary rates for period beginning from Notice-to-Proceed through December 31, 2016; billing will be based upon actual salary rate.

Brown and Caldwell Job Description and Rate of Compensation Categories				
Engineering	Technical/Scientific	Project	Salary Range (\$/Hr.)	
			Minimum	Maximum
LEVEL A				
N/A	N/A	Office/Support Services I	10.00	20.00
LEVEL B				
Drafter Trainee	Field Service Technician I	Office/Support Services II	11.00	20.00
Student Trainee I		Project Assistant Aide	11.00	20.00
		Telephone Operator I	11.00	20.00
		Word Processor I	11.00	20.00
LEVEL C				
Assistant Drafter	Field Service Technician II	Librarian I	13.00	26.00
Student Trainee II	Lab Technician	Office/Support Services III	13.00	26.00
		Senior Project Assistant	13.00	26.00
		Telephone Operator II	13.00	26.00
		Word Processor II	13.00	26.00
LEVEL D				
Drafter	Field Service Technician III	Accountant I	16.00	31.00
Engineering Aide		Librarian II	16.00	31.00
Engineering Technician I		Marketing Coordinator I	16.00	31.00
Inspection Aide		Office/Support Services IV	16.00	31.00
		Project Coordinator I	16.00	31.00
		Sr. Acct Clerk	16.00	31.00
		Telephone Operator III	16.00	31.00
		Word Processor III	16.00	31.00
LEVEL E				
Assistant Designer	Computer Programmer	Accountant II	19.00	34.00
Engineer I	Sr Field Service Tech	Administrative Coordinator	19.00	34.00
Engineering Technician II		Community Relations Asst	19.00	34.00
Geologist/ Hydrogeologist I		Executive Support Services I	19.00	34.00
Inspector I		HRIS/Benefits Administrator	19.00	34.00
Scientist I		Legal Assistant I	19.00	34.00
Senior Drafter		Marketing Coordinator II	19.00	34.00
Senior Illustrator		Project Accountant II	19.00	34.00
		Project Coordinator II	19.00	34.00

Brown and Caldwell Job Description and Rate of Compensation Categories				
Engineering	Technical/Scientific	Project	Salary Range (\$/Hr.)	
			Minimum	Maximum
		Project/Contract Coordinator	19.00	34.00
		Word Processor IV	19.00	34.00
LEVEL F				
Designer	Comp Sys Analyst/Programmer I	Accountant III	22.00	41.00
Engineer II	IT Coordinator/Administrator	Administrative Supervisor	22.00	41.00
Engineering Technician III		Area Bus Ops Mgr I	22.00	41.00
Geologist/Hydrogeologist II		Benefits/Comp/Generalist	22.00	41.00
Inspector II		Executive Support Services II	22.00	41.00
Lead Drafter		Project Analyst III	22.00	41.00
Lead Illustrator		Manager, Regional Facilities	22.00	41.00
Scientist II		Marketing Coordinator III	22.00	41.00
		Mgr. Office/Support Services	22.00	41.00
		Sr Project Coordinator	22.00	41.00
		Supv, Word Processing	22.00	41.00
		Technical Writer	22.00	41.00
LEVEL G				
Engineer III	Comp Analyst/Program II - Ex	Accountant IV	26.00	54.00
Geologist/Hydrogeologist III	Comp Analyst/Program II - NE	Administrative Manager	26.00	54.00
Inspector III	Comp App Supp Coord - Ex	Area Bus Ops Mgr II	26.00	54.00
Scientist III	Comp App Supp Coord - NE	Assistant To CFO	26.00	54.00
Senior Designer	Information Systems Auditor	Assistant To General Counsel	26.00	54.00
Sr Engineering Technician	IT Analyst/Developer - Ex	Benefits Supervisor	26.00	54.00
Supervising Drafter	IT Analyst/Developer - NE	Benefits/Comp Analyst II	26.00	54.00
Supervising Illustrator	Supv. Office Comp Svcs - NE	Contracts Administrator	26.00	54.00
	Supv. Office Comp Svcs. - Ex	Financial Analyst III	26.00	54.00
	Supv. Business Consultant	Marketing Support Manager	26.00	54.00
		Sr. Corporate Accountant	26.00	54.00
		Sr. Tech Coordinator/Analyst	26.00	54.00
		Supv, Library Services	26.00	54.00
LEVEL H				
Chief Drafter	Mgr. Computer Services - Ex	Area Bus Ops Mgr III	29.00	62.00
Principal Designer	Mgr. Computer Services - NE	Assistant To CEO	29.00	62.00
Senior Constr. Engineer	RISSM I - Ex	Communications Manager	29.00	62.00



Brown and Caldwell Job Description and Rate of Compensation Categories				
Engineering	Technical/Scientific	Project	Salary Range (\$/Hr.)	
			Minimum	Maximum
Senior Engineer	RISSM I - NE	Manager, Accounting	29.00	62.00
Senior Scientist		Mgr. Collections/CAR	29.00	62.00
Sr Geol/Hydrogeologist		Mgr. Corporate Facilities	29.00	62.00
		Project Control Manager	29.00	62.00
		Senior Technical Writer	29.00	62.00
LEVEL I				
Prin Geol/Hydrogeologist	CISSM	Corp.Contract Administrator	34.00	67.00
Principal Constr. Engineer	I S Project Mgr.	Product Manager I	34.00	67.00
Principal Engineer	IT Project Manager	Sr. Elect Media Specialist	34.00	67.00
Principal Scientist	RISSM II	Health & Safety Risk Mgr	34.00	67.00
Supervising Designer	Sr. Graphic Designer		34.00	67.00
Sr. Construction Eng.	Sr. IT Analyst/Developer - Ex		34.00	67.00
LEVEL J				
Chief Designer	Sr. IT Analyst/Developer - NE	Assistant Controller	40.00	81.00
Supervising Constr. Eng.	Sr. IT Project Manager	Client & Bus. Developer	40.00	81.00
Supervising Engineer	Sr. Web Analyst - Ex	Govt Contracts Acct Mgr	40.00	81.00
Supervising Scientist	Sr. Web Analyst - NE	Mgr. Human Resources	40.00	81.00
Supv Geol/Hydrogeologist		Product Manager II	40.00	81.00
		Regional Marketing Manager	40.00	81.00
		Risk Manager	40.00	81.00
		Training & Dev. Mgr	40.00	81.00
LEVEL K				
Managing Engineer	Director, Information Technology	Area Bus Ops Mgr IV	44.00	93.00
Mng Geol/Hydrogeologist	Information Resources Mgr	Controller	44.00	93.00
Managing Scientist	IT Program Manager	Corp Health & Safety Dir	44.00	93.00
	Manager, Info Systems	Corporate Treasurer	44.00	93.00
LEVEL L				
Chief Engineer	Manager, Info Tech Svcs	Corp Marketing Comm. Mgr.	48.00	150.00
Chief Geol/Hydrogeologist	Princ. IT Analyst/Developer	Corporate Counsel	48.00	150.00
Chief Scientist	N/A	Sr. Client & Bus. Developer	48.00	150.00
Executive Engineer	N/A	N/A	48.00	150.00
LEVEL M				
Vice President	N/A	N/A	56.00	117.50
LEVEL N				

Brown and Caldwell Job Description and Rate of Compensation Categories				
Engineering	Technical/Scientific	Project	Salary Range (\$/Hr.)	
			Minimum	Maximum
Senior Vice President	N/A	N/A	82.00	130.50

## **EXHIBIT D**

### **Project Schedule**

<b>Event</b>	<b>Completion Time (weeks after NTP)</b>
Notice to Proceed (NTP)	0
Kickoff Meeting	1
Data Review and Evaluation	4
Odor Control Criteria Development	6
Submit Approach Technical Memorandum	8
Model Development	16
Submit Baseline Model Technical Memorandum	18
Baseline Model Review Meeting	22
Field Sampling Program	46
Model Update	52
Final Review Meeting	55
Submit Final Report	57
Continuous Compound Monitoring	<b>Note 1</b>

**Note 1:** This task shall be executed upon authorization of the MSDGC project manager.